

Amendments to the Claims:

Cancel claims 1-36, without prejudice.

The following listing of claims will replace all prior versions and listings of claims in the application:

1.-36. (cancelled)

37. (new) A fuel cell comprising:

a reaction chamber;

a plurality of capillary tubes configured to permit a fuel component to flow there through, the capillary tubes being arranged in bundles in adjacent segments within the reaction chamber;

a plurality of electrodes, at least one of the plurality of electrodes passing through each of the plurality of capillary tubes, being against each of the plurality of capillary tubes, or passing through and being against each of the plurality of capillary tubes; and

a plurality of counter-electrodes,

wherein each electrode extends beyond ends of its respective capillary tube,

wherein electrodes associated with capillary tubes of a segment are electrically connected to one another at each end at substantially the same electrical potential, and

wherein each segment has a wall section to which is attached at least one of the counter-electrodes or wherein the wall section at least partially forms at least one of the counter-electrodes.

38. (new) The fuel cell of claim 37, wherein the segments are circular segments.

39. (new) The fuel cell of claim 37, wherein the electrodes of a capillary tube of each segment are electrically connected to the counterelectrode of the adjacent segment.

40. (new) The fuel cell of claim 37, wherein the electrodes are electrically connected to one another at their adjacent ends.

41. (new) The fuel cell of claim 37, further comprising a switch and electrical connections are capable of being preset by the switch.

42. (new) The fuel cell of claim 37, wherein each segment has its own wall.

43. (new) The fuel cell of claim 42, wherein two adjacent segments have wall sections which face each other and form two spaced separating walls.

44. (new) The fuel cell of claim 37, wherein two adjacent segments share a common separating wall.

45. (new) The fuel cell of claim 43, wherein the separating walls are constructed without a seal.

46. (new) The fuel cell of claim 43, wherein each of the separating walls has a separately constructed counterelectrode which constitutes the counterelectrode of the respective segment.

47. (new) The fuel cell of claim 44, wherein the common separating wall has a counterelectrode on each side.

48. (new) The fuel cell of claim 47, wherein each of the counterelectrodes comprises a support sheet, and a lattice-shaped mount for a catalyst, the lattice-shaped mount covering the support sheet.

49. (new) The fuel cell of claim 37, wherein each of the capillary tubes comprises a lattice-shaped core comprised of titanium, a catalyst surrounding the lattice-shaped core, and a membrane surrounding the catalyst.

50. (new) The fuel cell of claim 48, wherein at least one of the support sheet and the lattice-shaped mount is comprised of titanium.

51. (new) The fuel cell of claim 37, wherein ends of the capillary tubes are open so that a gas can flow through each of the capillary tubes.

52. (new) The fuel cell of claim 51, further comprising a pressure chamber formed at one of the open ends of each of the capillary tubes, and a ventilator for admitting atmospheric air into the pressure chamber.

53. (new) The fuel cell of claim 52, further comprising a common, closed-end feed line for the fuel component, the feed line extending between the segments and having openings through which the fuel component can flow into the reaction chamber.

54. (new) The fuel cell of claim 37, further comprising an exhaust gas line extending from outside of the fuel cell and having openings through which a gaseous reaction product in the reaction chamber can flow into the exhaust gas line and out of the fuel cell.

55. (new) The fuel cell of claim 53, further comprising an exhaust gas line extending from outside of the fuel cell and having openings through which a gaseous reaction product in the reaction chamber can flow into the exhaust gas line and out of the fuel cell.

56. (new) The fuel cell of claim 55, wherein the exhaust gas line is a continuation of the feed line.

57. (new) The fuel cell of claim 53, further comprising:
a pump chamber formed at the other of the open ends of each of the capillary tubes; and
a pump installed in the pump chamber and connected to the feed line.

58. (new) The fuel cell of claim 57, further comprising:
pumps for pumping the respective individual components of the fuel component into the feed line; and
a control system for automatically controlling operation of the pumps to optimally adjust proportions of the respective individual fuel components.

59. (new) The fuel cell of claim 58, wherein the individual fuel components comprise water and methanol.

60. (new) The fuel cell of claim 52, wherein the fuel cell is oriented that the capillary tubes are disposed vertically and the pressure chamber is disposed above the reaction chamber.

61. (new) The fuel cell of claim 60, further comprising a collecting chamber for collecting a liquid phase emerging from the plural capillary tubes.

62. (new) The fuel cell of claim 61, wherein the liquid phase is water, and further comprising a means for returning the water to the reaction chamber.

63. (new) The fuel cell of claim 37, wherein the reaction chamber is filled with acidic methanol.

64. (new) The fuel cell of claim 37, further comprising at least one level sensor for monitoring a filling level of the fuel component in the reaction chamber.

65. (new) The fuel cell of claim 63, wherein a free space remains above the acidic methanol.

66. (new) The fuel cell of claim 64, wherein if the filling level is outside a range of levels, a reaction process occurring in the fuel cell is stopped.

67. (new) The fuel cell of claim 37, further comprising:
a cylindrical housing having opposite first and second axial ends;
a first cover plate covering the first axial end; and
a second cover plate covering the second axial end,
wherein the segments are disposed inside the cylindrical housing with the ends of each of the capillary tubes extending through the first and second cover plates.

68. (new) The fuel cell of claim 67, wherein each of the first and second cover plates are configured to grip the segments and hold the segments in place, each of the first and second cover plates further comprising panels in which ends of the capillary tubes are mounted.

69. (new) The fuel cell of claim 68, further comprising connectors electrically connected to the counter-electrodes, and wherein the connectors extend through the first and second cover plates.

70. (new) The fuel cell of claim 67, wherein the first and second cover plates have grooves on a side surface thereof, holding the segments in place.